# Implementation Strategies from a State Perspective
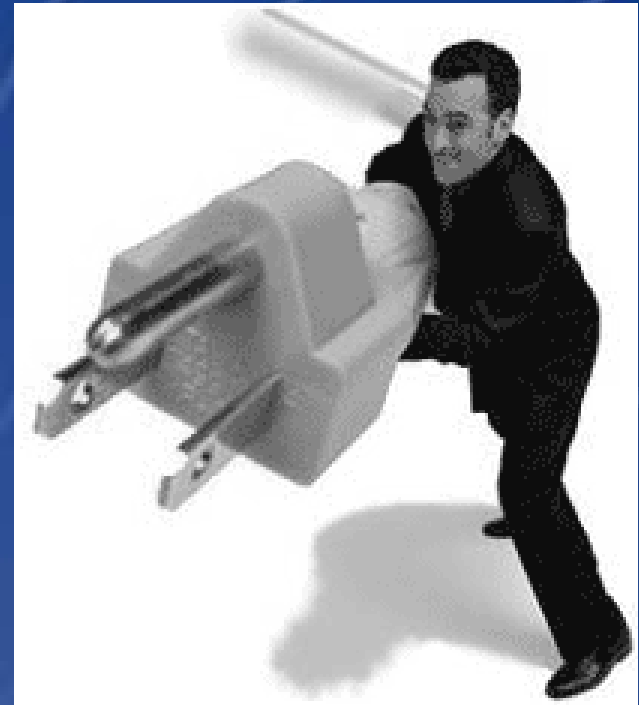
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# Your Public Health Lab Data Stream

- CDC and various Trading Partners are requesting to "plug into" your Public Health Lab data stream

# PHIN MS: Routing & Transport

- The CDC's Messaging System takes care of Routing and Transport of your lab data

- System is payload agnostic so may be used regionally within a state

# Problem: Integrating Your Lab Data

- How many sources of lab data exist for your implementation?

- Even low population states may involve as many as 50 disparate sources of lab data

- What shape is the lab data in? What is the level of HL7 compliance?

- How are reportables differentiated from non-reportables?



Lab Data
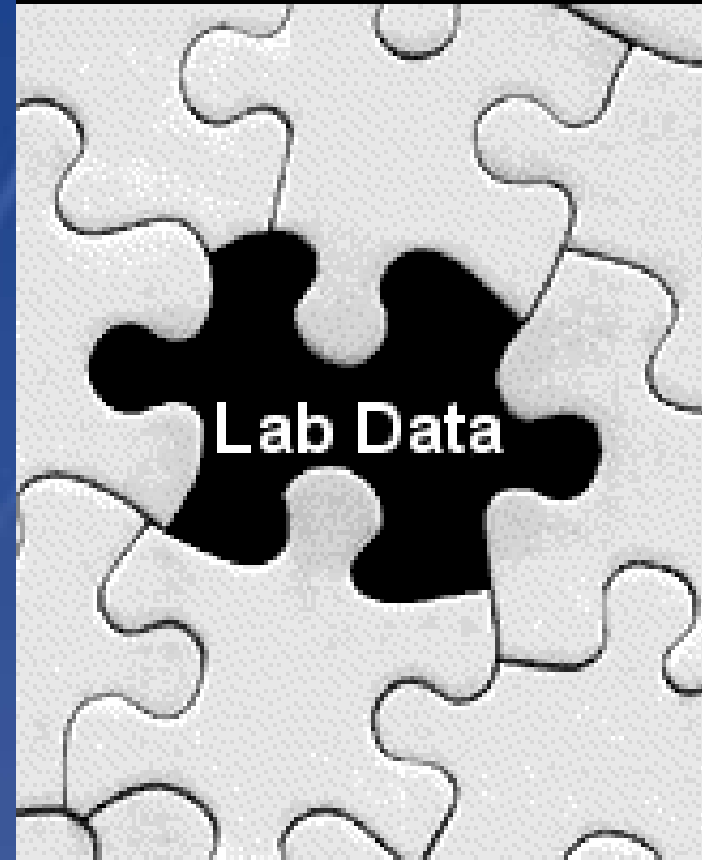
# Problem: Formatting & Translating

- Disparate formats must be converted into accepted HL7 version and able to be changed when needed

- Translations must be performed with regard to semantics, vocabulary and various coding standards (i.e. LOINC & SNOMED)

- Deidentification

```
MSH|^~\&|FLEXILAB|NEB|NPHL|UNMC|
PID|||PDA00107-8900118^^^1||DOE^JOI
PV1||OS|PDA00107^||||^|^||||||||||OS||||||||||
ORC|RE|100135819|||||||||||16614^SAFRA
OBR||100135819||HECCU^HEMORRHA
OBX|1|CE|SDES^Specimen Source|1|ST
OBX|2|CE|SREQ^Additional Info|1|None|
OBX|3|CE|CULT^Culture Result:|1|Positi
OBX|4|ST|RPT^Report Status|1|Final 050
```

# Problem: Filtering

- Example: Reportables - Potential for dozens of criteria that must be applied to determine reportability

- Each source of lab data probably requires a custom solution

- Process changes – how will you maintain this dynamic environment?

- Who decides?

# Solution: Integration Applications

- Rules-based filtering
- Mapping of field values
- Managed by designated authorities
- Easily configured and readily available as criteria changes
- Operated with collective input from peer Public Health Departments and Labs
- "Nice to haves"
  - Remote, web-base administration
  - Configurations available via to remote systems
  - Alert notification – blast fax, email & voice

# Integration Applications: How?

- MSH.3 – Sending Application
- OBR.4.0 – Ordered Test Code
- OBR.15.0 – Specimen Source
- OBX.3.0 – Performed Test Code
- Mapped LOINC Code to OBX.3.0
- OBX.5.0 Test Result and negated Test Result values
- Mapped SNOMED Code to OBX.5.0
- Others

# Solution: PHilter Application

- Comprised of a web-based front-end to create and maintain "Filter Profiles" or configurations for individual interfaces

- Backend utilizes configurations created and maintained by Public Health Lab authority via web-based application

- Extending via web-services to operate at the local lab level while drawing from the remote web-based configurations

- Can also operate on a centralized, service bureau model taking advantage of the economy of scale gained from collaborating with peer labs

# PHilter Integration Application